



CASE REPORT

Posttraumatic biliary stricture in a child

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Introduction

To arrive at correct diagnosis based only on findings of computerised tomographic scan (CT) or Endoscopic Retrograde Cholangioscopic Pancreatography (ERCP) alone without clinical history or per-operative cholangiography is difficult. Few patients with biliary stricture after blunt abdominal trauma exhibit a delayed onset of symptoms. Very few reports of biliary tract stricture following blunt abdominal trauma in children are available.

Case report

A 6-year-old female suffering from jaundice was referred to our hospital. The child had history of blunt abdominal trauma (fall from staircase) sustained 6 months back. CT scan at that time showed lacerations in segment VII of liver and at junction of body and tail of pancreas with periportal haematoma (Fig. 1). She was managed conservatively. Initial recovery was uneventful. The patient fol-

lowed up after 6 months with complaints of yellowish discoloration of sclera, skin and urine.

Physical examination showed presence of pallor and icterus. Abdominal examination revealed hepatomegaly (7 cm below costal margin) and a huge tense cystic gall bladder reaching up to right iliac fossa. Rest of the abdomen was normal on examination. Per-rectal examination was normal.

Investigations revealed haemoglobin to be 13 g% (10–14 mg%), serum bilirubin to be 11.3 mg/dl (0.2–1.0 mg/dl) with direct of 9 mg/dl and indirect of 2.3 mg/dl, serum alkaline phosphatase 1481 IU/L (210–810 IU/L) and AST of 176 KU (5–35 KU). Serum proteins were within normal limits. Urine examination for bile salts and bile pigments was positive. Ultrasonography showed mild to moderate dilatation of central intra hepatic biliary radicals, hugely dilated common bile duct (CBD) and distended gall bladder with sludge. Attempts at ERCP failed due to inability to cannulate the CBD.

Suspecting stricture at the lower end of CBD the patient was explored. Hepatomegaly with a tense gall bladder extending till the right iliac fossa was noted (Fig. 2). Per operative cholangiogram showed a hugely dilated CBD and hepatic ducts with abrupt cut-off at the supra pancreatic level (indicative of a tight stricture at that level) (Fig. 3).

A retro colic Roux-en-Y choledochojejunostomy was done along with cholecystectomy. The patient

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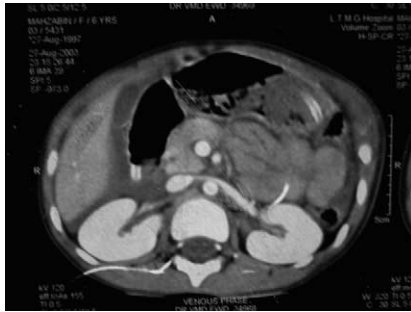


Figure 1 CT scan at that time showed periportal haematoma.



Figure 2 Liver was huge with a tense gall bladder extending till the right iliac fossa.



Figure 3 Intra-operative cholangiogram showing dilated C.B.D and hepatic ducts with sharp cut-off.

was started on feeds on sixth postoperative day. Patient is on regular follow up and the last direct bilirubin level was 2.5 mg/dl done 4 months after the surgery.

Discussion

Extra hepatic bile duct stricture following blunt abdominal trauma in children are rare.¹ Injury to the extra hepatic biliary system after blunt abdominal trauma is rare and may be overlooked due to associated intra-abdominal trauma.³

Stricture has been seen most commonly in the supra pancreatic portion⁵ as was in our case.

Patient with blunt abdominal trauma may present with biliary stricture after a varying period of time ranging from 6 months to 8 years.²

Immediate intervention depends on the patient's general condition and the institutions protocol. There are cases reported where conservative management has allowed healing to occur without bile duct stricture.⁴

CT Scan, ERCP and MRCP are good diagnostic tools. In many of the reported cases, exploratory laparotomy with intra-operative cholangiography was required.²⁻⁵

Conservative management of biliary tract injuries can lead to formation of fibrous scar or traumatic neuromas.² In our case, only fibrotic scar was observed.

This case report highlights the necessity for long-term follow up of children with blunt abdominal trauma for early diagnosis of delayed complication as seen in our case.

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